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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,565	02/22/2002	Eliezer Pasternak	2100259-991141	1996

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,565

Applicant(s)

PASTERNAK ET AL.

Examiner

Ishwar (I. B.) Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 23-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of an electrical component package, group I, claims 1-22,31 and 32 in Paper No. 4 and specie election, specie I reading on figure 1, is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

2. The drawings are objected to because the figures are improperly cross hatched. All parts shown in section, and only those parts, must be cross hatched. The cross hatching patterns should be selected from those shown on page 600-81 of the MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance

Oath/Declaration

3. The oath / declaration is objected as it does not identify the mailing or post office address of each inventor. A mailing or post office address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing or post office address should include the ZIP code designation. The mailing or post office address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, it is not clear what is meant by "base material thermally matched with the component to be mounted on the base." The examiner considered the component generating heat is covered / encapsulated in a thermally conductive material to have higher heat dissipation to the base.

Regarding claim 12, the applicant is claiming a conductive material is applied to the outside of the insulating material, but it is not clear which insulating material the applicant is referring. The examiner considered the conductive material applied on the insulating material on the wire.

6. Claims 3, 4 and 22 are objected because:

Claim 3 recites the limitation "connecting site on the said component" in line 2, claim 4 recites, 'each coaxial wire", line 1, and claim 22 recite "the shield side", line 3.

There are insufficient antecedent basis for those limitation in the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 and 8-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Uematsu et al., US Patent 5,847,453, hereafter Uematsu.

Regarding claim 1, Uematsu discloses an electrical component package comprising:

a substantially flat base to accommodate one or more electrical components on its surface (base plate 3, see figure 3, column 3, line 25-30), and one or more coaxial vias formed in base for input / output of electrical signals from the electrical component (terminals 34-37 and insulators 34a-37a). Though, Uematsu discloses a pin in the center, a skilled worker in the art can read the same as a via with a pin. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit board of Uematsu with via hole filled with metal or pin in order to have better and reliable electrical connection.

Regarding claim 2, Uematsu further discloses the coaxial via comprises a central conductive contact area surrounded by an insulating material ring, see figure 1.

Regarding claim 8, Uematsu further discloses base material comprises conductive material (metallic base plate 3, column 3, line 39-45.

Regarding claims 9 and 10, though Uematsu does not explicitly disclose the thermal conductivity of the base or the component, it is common in the art to use a thermally conductive material for the apparent reason of dissipating heat from the component. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit board of Uematsu with the base made of thermally conductive base in order to have better heat dissipation from the component.

Regarding claims 11 and 12, the applicant is claiming a solder mask on the coaxial via and on the surface on the package edge. Though Uematsu does not disclose such mask, providing solder mask is known in the art to avoid spreading of the solder at the connection point causing short circuit. Further, the mask will protect the circuit surface from damage. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit board of Uematsu with the solder mask in order to avoid any short-circuiting.

9. Claims 3-4, 13-15, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uematsu et al., US Patent 5,847,453, hereafter Uematsu, as applied to claims 1-2 above, and further in view of Zechman, US Patent No. 5, 622, 898.

Regarding claim 3, Though Uematsu discloses one or more wire connecting sites on said component, does not explicitly disclose such wire connecting sites are coaxial wire connecting sites. However, such coaxial wire connection is known in the art to avoid the distortion of wire and resultant short circuit. Zechman disclose such connecting sites on the component. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the circuit package of Uematsu with the coaxial wire connection sites on the component as taught by Zechman in order to avoid the distortion of wire and resultant short circuit.

Regarding claim 4, Uematsu further discloses each coaxial wire comprises a conductive bonding wire, a coating of insulating material and a conductive layer on the insulating material to form coaxial structure.

Regarding claim 13-15 and 31 and 32, the modified circuit assembly of Uematsu discloses all the features of the claimed inventions including the coaxial wire connection to the coaxial via as applied to claim 1-4 above.

Regarding claim 19-21, the modified circuit assembly of Uematsu discloses all the features of the claimed inventions including the electrically and thermally conductive

base material and thermally matched component as applied to claims 8, 9 and 10 above.

Regarding claim 22, the modified circuit assembly of Uematsu further discloses the conductive material on the wirer and the component, see Zechman figure 2.

10. Claims 5-7 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Uematsu and Zechman, US Patent No. 5, 622, as applied to claims 1-4 above, and further in view of Yamazaki et al., US Patent No. 6,191,492, Hereafter Yamazaki.

Regarding claims 5-7 and 16-18, the applicant is claiming a tapered transition at the coaxial wire connection. Though Uematsu does not explicitly disclose such transition, such transition is known in the art for apparent reason of getting better connections. Further, Yamazaki disclose such transition on both the end of the wire. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the modified circuit package of Uematsu with the transition and thicker insulation as taught by Yamazaki in order to have better and reliable electrical and mechanical connection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Val, Shibuya, Larsson, De Givry, Gorowitz et al., Inoue, Neftin et

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al., Suppelsa and Fasano et al., disclose the circuit board / circuit board package similar to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
November 30, 2002


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